

**Release Notes**

# hp StorageWorks Business Copy EVA/MA/EMA Server v2.2

**Product Version:** 2.2

Fourth Edition (October 2003)

**Part Number:** T3032-98101



The HP StorageWorks “Business Copy (BC) for enterprise virtual array (EVA), modular array (MA), and enterprise modular array (EMA)” is the new name for the “Enterprise Volume Manager (EVM)” software.

This document summarizes features and characteristics of the HP StorageWorks Business Copy Server v2.2 release that are not covered elsewhere in the documentation set.



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## About this Document

This section describes the content reflected in this document, including:

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- [Intended Audience](#), page 3
- [Business Copy Documentation](#), page 3
- [Business Copy Product Updates](#), page 3

### Release Notes Information

These Release Notes cover the following major topics:

- [Hardware and Software Requirements](#), page 4
- [Limitations and Known Issues](#), page 8

### Intended Audience

This document is intended for customers who purchased BC v2.2 (or BC v2.1 or v2.1a and are now updating these environments to BC v2.2), and for HP authorized service providers responsible for installing, configuring, and maintaining systems that include BC software.

### Business Copy Documentation

BC documentation includes documents distributed through an initial purchase of BC v2.2, or BC v2.1 or v2.1a (contained in a BC documentation kit) and through a Web release of BC updates. Refer to the *HP StorageWorks Business Copy EVA/MA/EMA v2.2 Read Me First* (T3032-99101) or *HP StorageWorks Business Copy EVA/MA/EMA v2.2 Update Read Me First* (AA-RQ70G-TE) for a list of these documents and document part numbers.

All BC documentation (except the BC online Help/User Guide) is available from the BC product page website:

<http://h18000.www1.hp.com/products/storage/software/bizcopyeva/index.html>.

### Business Copy Product Updates

BC product updates, if available, are located at the BC software and drivers page website:

<http://h18000.www1.hp.com/products/storage/software/bizcopyeva/index.html>.

## Hardware and Software Requirements

The following sections identify hardware and software that support the use of BC v2.2. Topics include:

- [Storage Management Appliance Requirements](#), page 4
- [Browser and JRE Requirements](#), page 4
- [Element Manager Requirements](#), page 6
- [Supported Compaq StorageWorks Controllers](#), page 6
- [Snapshot Requirements](#), page 6

### Storage Management Appliance Requirements

BC Server v2.2 is supported on the following Storage Management Appliance versions:

- SMA v2.0 with Service Pack 4
- SMA v2.1

### Browser and JRE Requirements

Browser and JRE requirements are shown in [Table 1](#).

**Table 1: Browser/JRE Requirements—For Enhanced OSs**

Operating Systems With Enhanced Support	Internet Explorer	Netscape	Other	Supported JREs
AIX 5.1.0.0 (5100-04) (64-bit)	Not supported	7.0.0.3	n/a	1.4.1_00 (32-bit)
AIX 5.2.0.10 (5200-01) (64-bit)	Not supported	7.0	n/a	1.4.1_02 (32-bit)
HP-UX 11.11 (11iv1)	Not supported	7.0	n/a	1.4.1_02 (64-bit)
OpenVMS V7.2-2 (64-bit)	Not supported	Not supported	Secure Web Browser (SWB) 1.2-1	1.4.0_03
OpenVMS V7.3-1 (64-bit)				

**Table 1: Browser/JRE Requirements—For Enhanced OSs (Continued)**

<b>Operating Systems With Enhanced Support</b>	<b>Internet Explorer</b>	<b>Netscape</b>	<b>Other</b>	<b>Supported JREs</b>
Solaris 8	Not supported	7.0	n/a	1.4.1_03 or 1.4.1_b21 (32-bit)
Solaris 9 (64-bit only)	Not supported	7.0	n/a	1.4.1_03 or 1.4.1_b21 (64-bit)
Tru64 UNIX 5.1B, BL1	Not supported	6.2.3	n/a	1.4.1_02
Windows 2000 Advanced Server, SP3 or SP4	5.5 or 6.0 SP1 or later (IE 6.0.2800.1106 or later), 128-bit	Not supported	n/a	1.4.1_03 (32-bit)
Windows NT 4.0, SP6a	5.5 or 6.0 SP1 or later (IE 6.0.2600, q818529 or later), 128-bit	Not supported	n/a	1.4.1_03 (32-bit)
Windows Server 2003 Enterprise and Datacenter Edition (32-bit/IA32)	6.0 SP1 or later (IE 6.0.3790 or later)	Not supported		1.4.1_03 (32-bit)

## Element Manager Requirements

BC Sever v2.2 supports the following EVA and MA/EMA Element Managers:

- EVA
  - Command View EVA v3.0a
  - Command View EVA v3.1
- MA/EMA
  - HSG80 Element Manager v1.0E
  - HSG80 Element Manager v1.0F

## Supported Compaq StorageWorks Controllers

BC v2.2 supports the following StorageWorks™ array controllers:

- EVA
  - EVA3000 with VCS 2.006, VCS 3.0 or VCS 3.010
  - EVA5000 with VCS 2.006, VCS 3.0 or VCS 3.010
- MA/EMA
  - RA8000 with ACS 8.6-13 or 8.7-3
  - MA8000 with ACS 8.6-13 or 8.7-3
  - EMA12000 with ACS 8.6-13 or 8.7-3
  - EMA16000 with ACS 8.6-13 or 8.7-3

## Snapshot Requirements

### HSG80-based Storage Arrays

The BC snapshot feature uses the hardware level snapshot functionality provided by the HSG80 controller and enabled by the Array Controller Software (ACS). To support snapshot, the HSG80 controller and the ACS require the following configuration attributes:

- ACS Version 8.6S, 8.6P, 8.7S, or 8.7P
- Fibre Channel switched fabric topology

- Dual HSG80 controllers in multibus failover mode
- 512 MB of cache per controller
- Mirrored cache

## **HSV100 and HSV110-based Storage Arrays**

The BC snapshot feature uses the hardware level snapshot functionality provided by the HSV controller and enabled by the Virtual Controller Software (VCS). In order to support snapshot and snapclone, a valid Business Copy replicated-capacity tier license must be applied to each storage system using the Command View EVA Element Manager.

## Limitations and Known Issues

This section is an extension of a similar section in the BC Network Administration Guide and can help avoid problems while using BC v2.2. Limitations and known issues include the following topics:

- [UNIX OSs with Netscape Browsers and JRE 1.4.0x](#), page 8
- [EVMsm Error when Rebooting](#), page 9
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- [Tru64 UNIX Clusters \(TruClusters\) Are Not Displayed in Save/Restore Drop-down List](#), page 10
- [BC GUI May Not Display Properly with Certain Combinations of Browser and JRE Installed](#), page 11
- [BC Server May Hang when Continuous Access User Interface Is Installed](#), page 11

### UNIX OSs with Netscape Browsers and JRE 1.4.0x

**Description:** Sporadically, UNIX® OSs with Netscape browsers and JRE versions 1.4.0x may experience a problem entering data in specific fields of the Job Create page. This intermittent problem is referenced as a known bug in the Sun Microsystems Bug Database (# 4767070).

**Error Indication:** Inability to insert text in the **Name**, **Owner**, and **Category** fields of the Job Create page.

**Resolution/Workaround:** A fix is in JRE 1.4.1\_02. A workaround for prior JRE versions involves using the mouse to change *focus* away from the current application to another window, and then returning back to the current application.

In BC, for example, the user can click *focus* away from the applet area in BC by:

1. Clicking in the upper header area of the BC GUI, and then
2. Clicking back within the applet area to regain *focus* on the text fields.

## EVMsm Error when Rebooting

If the Storage Management Appliance is rebooted, the System Event Log may display this error: The EVMsm service hung on starting. The EVMsm service does not actually hang, and this error is not an indication of a problem.

## BC Pages are Blank

Occasionally, pages in the BC GUI may show up blank or grey with a small red “x” in the upper left corner. This is a problem with JRE 1.4.1\_03 and earlier. A workaround can be applied by simply reloading the page. This problem will be addressed in a future JRE version.

## Slow GUI Response Times While Jobs are Running

The responsiveness of the BC GUI is dependent on the number of currently running jobs and the size of the configuration, in terms of the number of storage subsystems and BC Host Agents. In extreme cases, it may take as long as 30 seconds for the GUI to respond to requests that involve creating or editing jobs. To reduce the probability of encountering long GUI response times, HP recommends performing all job creation and maintenance operations during periods when there are no jobs running.

Unassigned hosts in the HSV Element Manager prevent BC from determining host connection information.

## Some Sequences of Job Steps are not Supported

BC jobs that involve the creation of more than one BCV can be created in several different ways. For example, a simple job that creates and mounts two snapshots might contain the following steps:

SNAP...

MOUNT...

SNAP...

MOUNT...

Or it might contain the same steps in a slightly different order:

SNAP...

SNAP...

MOUNT...

MOUNT...

In most cases, either sequence will complete the task, but jobs that involve the replication of IBM AIX, HP-UX, or HP Tru64 volume groups may fail if the first format is used. To prevent such problems, keep the MOUNT steps separate from the BCV creation steps (SNAP, CLONE, NORMALIZE, SPLIT, etc.) when creating BC jobs. The Job Templates on the Create Job page provide an example step sequence for most common job types.

## **.sto Files Must be Deleted if Manual HSG Clone Cleanup is Performed**

BC maintains a record of the resources used for all HSG clone operations. This information is stored in the \program\files\Compaq\sanworks\enterprise volume manager\bin folder in files that end with a .sto extension. If clone devices created by BC are manually deleted or modified, it will be necessary to delete the corresponding .sto file for that clone device.

## **Running Multiple Simultaneous Jobs**

BC supports the simultaneous execution of up to eight jobs. However, if more than one currently running job references the same storage or host resources, one or more of the jobs may fail. To prevent this problem, ensure that unique storage and host resources are specified for any jobs that must be run simultaneously.

## **Unused HSG Disks Must Be Initialized Before BC Can Use Them**

BC must know the capacity of an HSG disk before BC can determine if this disk can be used for a clone or snapshot. Unused HSG disks that have not been initialized do not report a capacity; therefore, these disks cannot be used by BC. To prevent this problem, make sure all unused disks have been initialized with the HSG CLI INITIALIZE command.

## **Tru64 UNIX Clusters (TruClusters) Are Not Displayed in Save/Restore Drop-down List**

TruCluster names do not display in the **Hosts** drop-down list in the **BC Configuration** window, under the **Save/Reload** tab. Nonclustered Tru64 UNIX hosts are displayed in this drop-down list. This problem will be addressed in a future version of BC.

## **BC GUI May Not Display Properly with Certain Combinations of Browser and JRE Installed**

The supported browser and JRE versions for each platform are defined in the BC Network Administration Guide and platform-specific BC host agent Release Notes. In most cases, these browser/JRE combinations display the BC GUI correctly. However, variations in browser and Java technology on the various platforms can cause some GUI elements to display incorrectly. For best results, HP recommends using a Microsoft Windows® platform from which to browse to the BC GUI.

## **BC Server May Hang when Continuous Access User Interface Is Installed**

If Continuous Access User Interface V1.1 is installed on a Storage Management Appliance that is running Business Copy EVA, the BC Server software may hang. To resolve this problem, refer to the Release Notes for Continuous Access User Interface V1.1.